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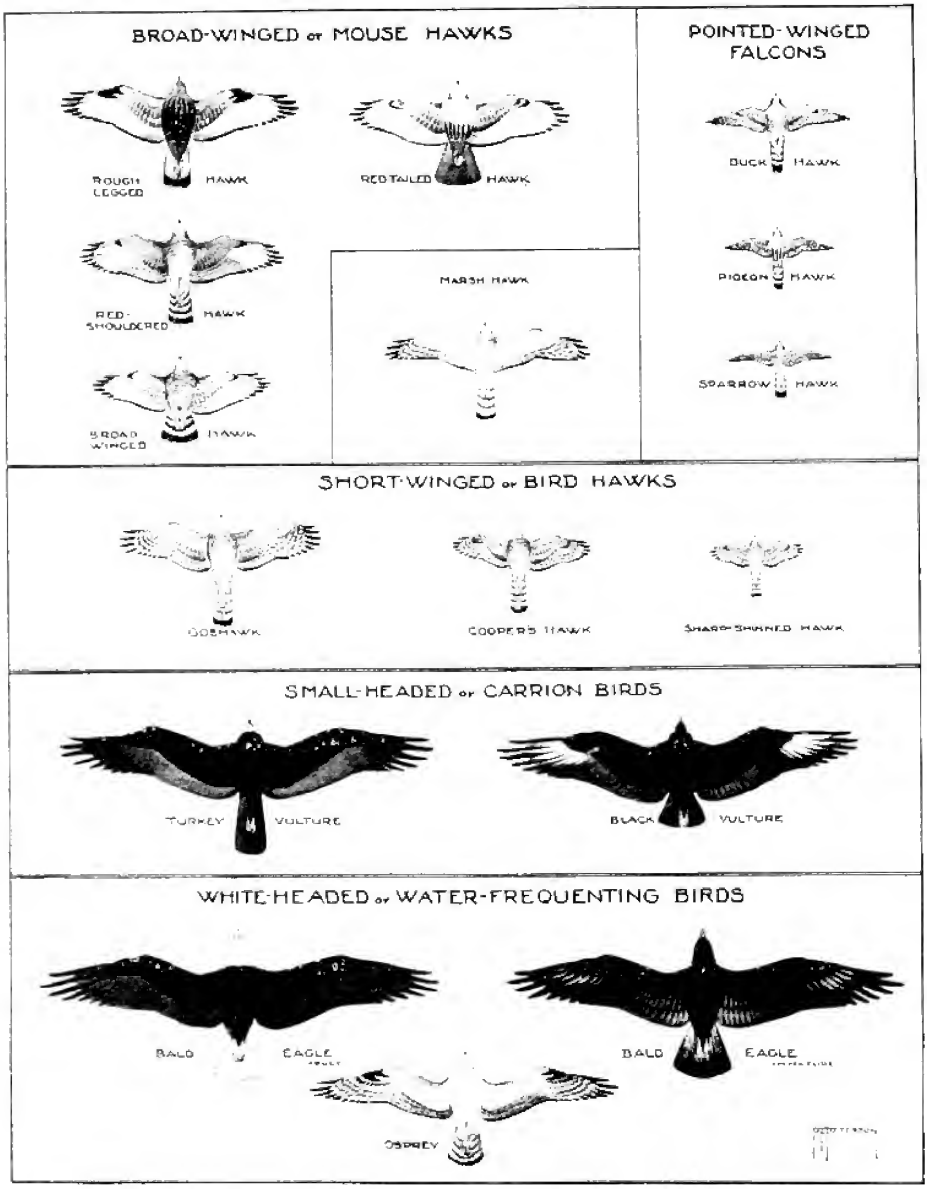
EASTERN HAWKS—*What They Look Like in the Air*

Atlantic Coast West to the Great Plains — All Birds Drawn to Same Scale



Some of These Hawks Are Among Our Most Useful Birds

Courtesy of Natl. Assn. of Audubon Societies.

IOWA HAWKS AND THEIR ECOLOGICAL NICHES

By RICHARD H. POUGH
National Association of Audubon Societies

The original fauna of Iowa included ten nesting species belonging to the bird-of-prey order Today, two of these are gone. Was it because the habitat they required was destroyed as a part of what we call settlement and progress? Is the ecological niche they occupied, in the original primitive natural balance that the fauna and flora of Iowa represented, gone? If so, their loss was inevitable and whether they were shot or not becomes entirely an incidental matter.

The Bald Eagle and the Swallow-tailed Kite are the two once-common species now lost. Is it just a coincidence that they are, of all ten, the two most picturesque and spectacularly beautiful? The niches they occupied, the habitats they required, and the food chains of which they formed the ends, are still in existence. Why are they gone? To what can we contribute this impoverishment of our fauna; this loss of two beautiful species that once graced the Iowa landscape? If the food to feed them and the habitat to furnish homes for them are still here, why are not they?

The evolution of the native fauna and flora of Iowa created places, in other words niches, for a vast number of living things. Each had certain unique characteristics that adapted it perfectly to some habitat and food supply. If a native species is lost, no other exactly fills the gap created. The food that could have supported a population of Swallow-tailed Kites and Bald Eagles now goes unutilized and every citizen of Iowa is the poorer for it.

There would seem to be only one answer to the disappearance of these birds—willful destruction at the hands of man. But why the insect-eating and completely harmless Kite of all species? The common desire to kill that which is large, conspicuous and beautiful would seem to be the answer, plus possibly the fact that they made good targets. The reason in the case of the Bald Eagle is similar, although in its case prejudice against it as an allegably harmful species probably also entered in, plus the desire for the bird as a mounted trophy.

What is to be the future of the eight species of birds of prey that Iowa has left? They are still being mercilessly persecuted by many people, despite the fact that all but two are now protected by law. Many are now scarce where they were once common. Must they go too? The answer lies in the future, but the members of the Iowa Ornithologists' Union, more than any other group in the state, have the responsibility for seeing that everything possible is done to make sure that the answer is "no." You know the loss that every citizen of Iowa who has an eye for the beauty of the outdoor world, and the things that live in it, would suffer if they went; a loss for which there would be no compensating gain.

The unprotected Sharp-shinned and Cooper's Hawks live on birds, but unless they cause loss to poultry they do no harm to man. Game if provided with good habitats and food need not fear them unduly, as they will catch but few. The other species on which they prey are prolific and produce numbers of young each year that far exceed those needed to replace individuals dying of old age. Obviously, the habitats of the various species cannot for long accommodate constantly increased numbers. What better purpose then can these surplus birds fulfill each year than to continue the food chain by which they were fed Kill these hawks and the surplus birds they have always fed on must die some other way, while those who enjoy the aerial prowess of these masters of flight are robbed of one of the thrilling sights of the outdoors. Still greater is the loss if the Red-tailed, Red-shouldered, Rough-legged, Marsh and Sparrow Hawks go, because their presence tends to hold at normal levels such troublesome species as small rodents and grasshoppers, or the Vulture that is such a useful and utterly harmless scavenger.

A MARSH NESTING COLONY OF BLACK-CROWNED NIGHT HERONS*

By
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and
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For the past five years the senior author has carried on waterfowl investigations in the vicinity of Ruthven, Iowa. During the course of the waterfowl studies a close check was made each year on other marsh and prairie birds that nested in the region. The region is the largest remnant of breeding grounds for ducks and other marsh nesting birds left in the State.

On July 7, 1937, while on a field trip in Barringer's Slough, Clay County, Iowa, the writers came upon a colony of Black-crowned Night Herons (*Nycticorax nycticorax hoactli*) nesting in the marsh environment. Although the bird is not an uncommon nesting bird in Iowa, it is usually found nesting in trees. Because of the shortage of records of this bird nesting in marsh habitats in the State, the writers have undertaken to give a description of the colony and its home. The observations were made July 7 to July 25, 1937. The study was not complete, as the colony was not found until after incubation had started and the observations ceased before the young birds were able to fly.

Barringer's Slough is a marsh of approximately 1,500 acres lying immediately southwest of Lost Island Lake. During the spring of 1937 the Iowa Conservation Commission purchased about 500 acres of the slough for a waterfowl restoration project. Eventually the area will be improved to produce near the maximum numbers of wildlife.

The heron colony of 31 nests was located in a 15-acre arm in the northeast end of the slough. The colony of nests itself covered, roughly, five acres of the 15-acre tract. About four acres of sedges (*Carex riparia*), river bulrush (*Scirpus fluviatilis*), spike rushes (*Eleocharis spp.*), arrow-head (*Sagittaria latifolia*), and bur-reed (*Sparganium eurycarpum*), in water 16 to 24 inches deep, was surrounded by a dense growth of bulrushes (*Scirpus occidentalis*, *S. validus*, and *S. fluviatilis*) 24 to 60 inches tall in water 13 to 25 inches deep. The low vegetation surrounded by the taller growths gave the appearance of an arena-like situation. It was in the tall vegetation surrounding and facing the lower vegetation that 25 of the nests were found. There were nine clumps of tall bulrushes, seven clumps of reeds (*Phragmites communis*), and one clump of cattails (*Typha latifolia*) out in the shorter vegetation. Six nests were found in the clumps of bulrushes out in the shorter vegetation.

The nests were grouped quite closely together. The average distance from nest to nest was about eight yards. Some nests were within four feet of each other, and one nest was 50 yards from the nearest nest.

NESTING DATA

Number of Eggs. The common number of eggs found in the nests was four. Nests containing three (Figure 1) and five eggs were also observed.

Construction of Nests. All the nests were constructed of bulrushes (*S. occidentalis*, *S. validus*, or *S. fluviatilis*). Five of the nests had supporting material of sedges (*C. riparia*).

Location of Nests. All the nests were found in the tall bulrush cover

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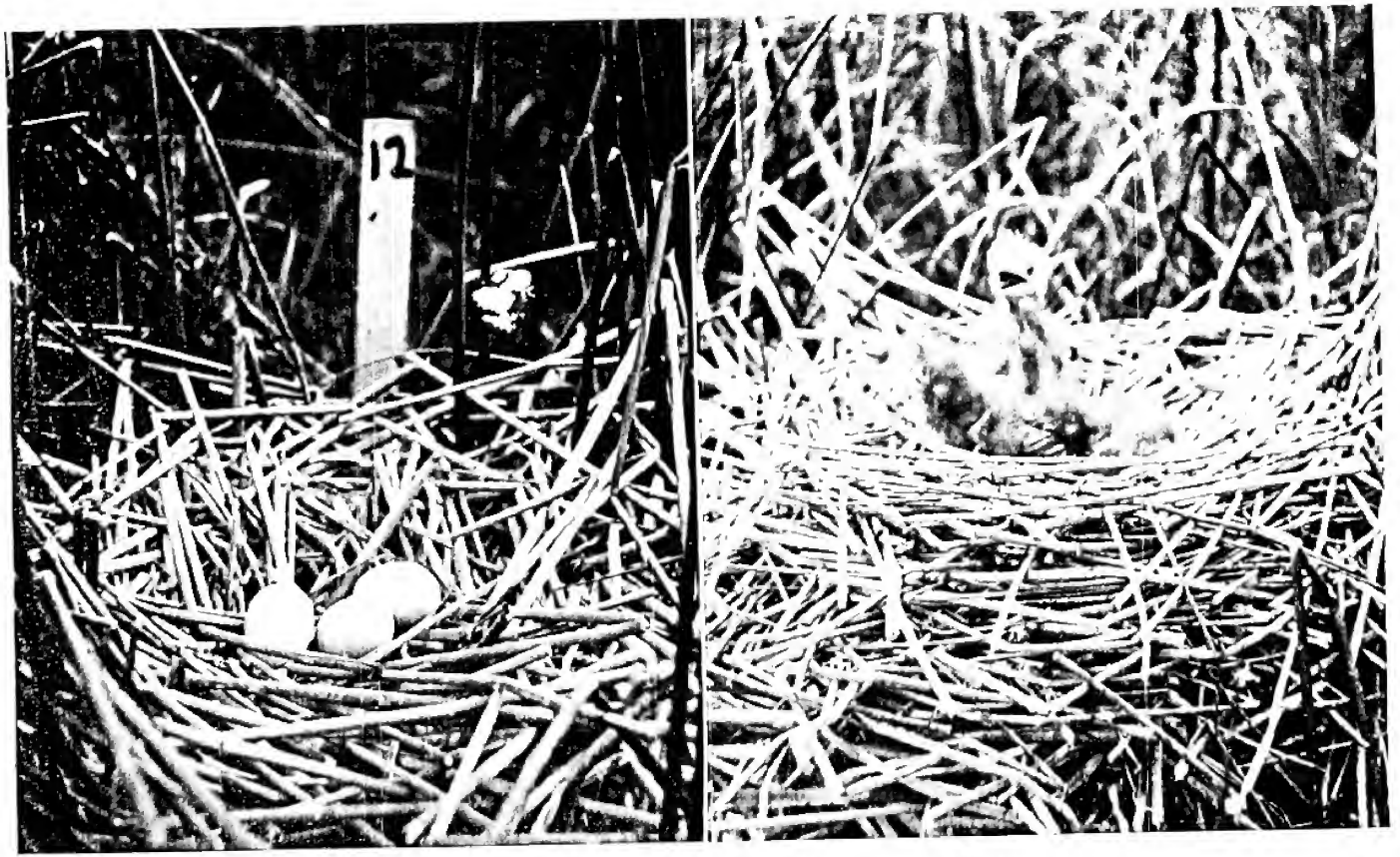
**Iowa State College, Iowa Conservation Commission, and the U. S. Bureau of Biological Survey co-operating with the American Wildlife Institute.



NESTING SCENES IN A NIGHT HERON COLONY

Figure I (left) shows a Black-crowned Night Heron nest containing three eggs. Figure II shows young Black-crowned Night Herons about ten days old. Photographs by Logan J. Bennett.

within ten feet of the edge facing the four acres of shorter vegetation.

Height of Nesting Cover. The bulrush cover in which the nests were found was 24 to 60 inches above the water. The density of the cover was 30 to 50 stems of bulrush per square foot.

Elevation of Nests above Water. The tops of the nests were 6 to 25 inches above the water.

Diameter of Nests. The nests ranged from 15 to 24 inches in outside diameter and from 9 to 18 inches inside diameter.

Ramp to Nest. A ramp of broken bulrushes leading from the water to the top of the nest was part of 26 nests. The ramps varied from 10 to 30 inches in length.

Depth of Water. The nests were constructed over water that was 13 to 27 inches in depth.

Distance of Nests from Dry Land. The colony of nests was about 100 yards from the shore.

Data obtained concerning nest destruction and desertion were very meager. On July 21 one nest of three eggs had been deserted for some unknown reason. One other nest of four eggs had been deserted, and one of the eggs had been punctured by the bill of some bird. Three eggs of another nest had been raked out of the nest into the water.

There was some evidence of juvenile mortality. Two dead young birds, about one week old, were found entangled in the vegetation of the ramp of one nest. One young bird, just hatched, apparently had been trampled by its older nest companions. Two other dead birds near two nests were found, but the cause of their demise remained unsolved.

On July 7, when the colony was visited for the first time, all the nests observed contained eggs but no young. At that time upon our approach to the nests the adult birds gave a squawk or two and flew away. On July 21, when most of the nests had from one to four young birds in them, the old birds often circled overhead two or three times and intermittently uttered squawks before they left the colony.

By July 18 some of the young birds had grown to a length of 12 inches. There was quite a variety of ages among birds in the same nest. Some had just hatched while others were ten days old or older. When the young reached the age of ten days or older they reached out with their heads and necks to peck at intruders (Figure II), and in doing so they usually uttered several hoarse squeaks.

There were some exhibitions of wariness on the part of the young birds after they attained the age of nearly two weeks. Two of the largest birds were found out in the water in the close proximity of their nests. Upon our approach they remained perfectly quiet with their heads and necks stretched out on the surface of the water. One of the juveniles was observed for five minutes and all the while hardly a feather twitched.

The nestlings appeared to have great grasping strength in their toes, but their legs were not strong enough to hold them upright. Upon becoming excited several ten-day-old birds stood up and then fell forward out of the nests into the water. They seemed to float very easily in the water but they navigated quite awkwardly.

The young birds were fed by the adults mostly during early morning and late evening. During the middle of the day when some of our observations were made, the young birds stuck out their heads and opened their mouths at the least sound, perhaps with the expectation of food. Notes were kept on food remains found in the nests. One nest contained the remains of one black bullhead (*Ameiurus melas*), one nest held portions of three dragon-fly naiads (*Odonata*), and in one nest were found parts of two salamanders (*Ambystoma tigrinum*).

Because of other duties, the writers were unable to carry on the studies through to the end of the rearing season. Perhaps in the future more complete observations can be made of the colony.

CONCLUSIONS AS TO THE FOOD HABITS OF THE BARRED OWL IN IOWA*

By
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Efforts to study the food habits of Iowa Barred Owls *(Strix varia)* on a quantitative basis have met with serious difficulties, chiefly because of the evident contamination of pellet deposits with the pellets of other owls. Great Horned Owls *(Bubo virginianus)*, in particular, make use of retreats in the coniferous plantings and deep bottomland woods usually frequented by Barred Owls—though seldom at the same time of year—and the majority of our Barred Owl pellet collections included some pellets containing bones of large prey broken in a way impossible for the weaker of these two species of owls.

Many Horned Owl pellets are, of course, characteristic enough in appearance to permit their being picked out of mixed lots, but the small and intermediate sizes may not be distinguishable from Barred Owl pellets of similar size if both owls have been feeding on similar types of prey (Errington, 1932a). That food habits as well as pellets of Horned and Barred Owls may at times have much in common has been demonstrated by recent summer studies of tethered young owls in south-central Wisconsin (Errington, 1932b).

Nevertheless, those lots of Barred Owl pellets that appear least contaminated should furnish a fair index to the food habits of this bird, especially if supplemented by the Wisconsin data from rather comparable habitats. The 305 Iowa pellets upon which our generalizations are based relate principally to fall, winter, and spring food habits of the Barred Owl in central (Boone and Story Counties) and southeastern (Jefferson and Wapello Counties) portions of the state for 1933-'34 and 1934-'35. We have few summer Barred Owl pellets from Iowa, but Errington's Wisconsin studies give us a good idea as to what may be expected of Iowa owls for this season. The supplementary Wisconsin data, as thus far organized and published (Errington, 1932b), were largely obtained from observations on 9 nests and from analyses (with the very material aid of the U. S. Biological Survey) of 156 spring and summer pellets for 1930 and 1931.

What the Barred Owl eats is mainly conditioned by where it is and by what prey it has a chance to feed upon with the greatest convenience. Despite the impression of size that it may give an observer (in the woods or in flight, it may seem almost as large as the Horned Owl), it is, after all, a slenderly built owl in a fluffy mass of feathers, and its talons do not look very powerful when compared with those of the larger raptorial birds. Considered season by season, the food habits of the Barred Owl reflect its adaptations and its apparent opportunities.

Let us begin our brief sketch of Barred Owl feeding tendencies with the young bird leaving the nest about the fore part of May. After gaining some powers of flight, the young are attended and fed by the adults for an unknown length of time, probably until June or July (young Barred Owls tethered on the ground may be fed by their parents as late as August).

We have few actual data on the food habits of young Barred Owls at the time that they become self-supporting. The young of other raptorial species worked with subsist upon large insects, snakes, and

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**Iowa Fish and Game Commission co-operating, with financial contributions from J. N. "Ding" Darling, 1932-'35.

other easily obtainable prey when they first start living independently, and we suspect this to be broadly true for Barred Owl juveniles, also.

Late summer and early fall diet appears to be made up strongly of animals resident in low places. Crayfish (*Cambarus*) constitute an important item, as do such cold-blooded vertebrates as small fish, frogs, and garter snakes (*Thamnophis*). Mammalian prey is largely of mice of different genera, especially *Microtus* and *Peromyscus*, with occasional heavy representation of barn rats (*Rattus norvegicus*) and moles (*Scalopus aquaticus*). The birds taken are of the kinds that are common locally: Native sparrows (Fringillidae); Grackles (*Quiscalus quiscula*), Blackbirds and other Icteridae; thrushes (Turdidae), notably Robins (*Turdus migratorius*); English Sparrows (*Passer domesticus*) and Starlings (*Sturnus vulgaris*); Flickers (*Colaptes auratus*); Blue Jays (*Cyanocitta cristata*); Brown Thrashers (*Toxostoma rufum*; Screech Owls (*Otus asio*); and individuals of miscellaneous species that may happen to be available.

In winter, the owls turn more to mammals as mice and shrews (Soricidae). Barn rats and flying squirrels (*Glaucomys volans*) may be locally available and accordingly preyed upon, as also may be moles and weasels (*Mustela*). To date, we have found no positive evidence of Barred Owls killing adult cottontail rabbits (*Sylvilagus floridanus*), although we think that they probably do, on occasion. The birds preyed upon during the cold weather months are of the usual small wintering species: Fringillidae, including Juncos (*Junco hyemalis*) and Cardinals (*Richmondena cardinalis*); English Sparrows and Starlings; small and medium-sized woodpeckers (Picidae); Blue Jays; Titmice and Chickadees (Parinae); Screech Owls; and Bob-whites (*Colinus virginianus*).

Early spring diet is much the same as that of the winter, with increasing representation of crayfish, fish, amphibia, and snakes, as the waters open up and animals come out of hibernation. With advancing spring, toll will be taken of the waves of passing migratory birds, and soon the remains of young cottontails and young fox squirrels (*Sciurus niger rufiventer*) may be noted in the nests or pellets of the owls.

With the coming of summer, however, the food of the Barred Owl becomes possibly still more varied. Among invertebrates, crayfish usually continue to head the list, but large insects (not including stomach contents of prey) such as *Phyllophaga* (May beetles), *Geotrupes*, and Dytiscidae (water beetles) may be frequently eaten. Staple vertebrate items are fish, salamanders (*Ambystoma tigrinum*), frogs, snakes, adults and young of the more abundant passerine birds, Flickers, young cottontails ranging in size up to about half grown, mice of several species, and, to a lesser extent, barn rats, miscellaneous rodents, moles, and shrews.

The nestling young seem to be fed the same sort of food that is eaten by the adult owls, except for very small prey (as insects) which the adults apparently eat upon capture and rarely carry to the nest. In early flying stages, the young are able to seize some insects for themselves, relying meanwhile on the usual food supplied them by their parents. Then, in due time, the young find themselves more and more "on their own" and feeding upon, like the adults, essentially what they recognize as food and are able to catch and to handle.

Preferences for certain kinds of prey, so far as we can see, seem to govern the natural feeding of the Barred Owl very little. Habit, however, probably plays a role in causing the owls to favor hunting grounds where the available prey may be of characteristic types. Virtually any animal living in the Barred Owl's habitat, from insects to the largest vertebrates within its power to kill, may fall victim, and the Iowa and Wisconsin notes at hand show such food items of interest as Kingfisher (*Megaceryle alcyon*), bat (*Myotis grisescens*), and small mink (*Mustela vison*).

Of the prey species occurring in the Barred Owl's diet, only the Bob-white has been thoroughly studied from the standpoint of population on the same areas where the Barred Owl work was done and

during contemporaneous seasons. In all observed instances of heavy Barred Owl pressure upon the Bob-whites, the latter were present in numbers exceeding the apparent capacity of their coverts to accommodate them. Under these conditions, reduction of surplus birds through predation is a regular happening, and within limits observed, seemingly irrespective of the kinds and numbers of natural enemies present (Errington and Hamerstrom, 1936). Excess Bob-whites are usually eliminated by the far more formidable Horned Owl or the Cooper's Hawk (*Accipiter cooperi*); but, in the event of scarcity or absence of Horned Owls and Cooper's Hawks, a compensating elimination seems to take place through the medium of weaker or clumsier predators, the Barred Owl included.

On the whole, the trend of research findings on predation and population indicates that the brunt of the attacks of predators is borne by those proportions of the prey populations that find themselves at the greatest disadvantage—individuals handicapped by over-crowding, territorial strife or some other form of friction among themselves, natural emergencies, immaturity, weaknesses, etc., plus some that are simply unlucky or unwary. Likewise, the concept is continually growing that a vast amount of predation is only of neutral significance as concerns the determination of population levels of many prey animals.

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BIRDS OF THE SIOUX CITY AREA IN 1936

By BRUCE F. STILES
SIOUX CITY, IOWA

The following list of 136 species is made from my own observations and should by no means be considered a complete 1936 list for this territory. Many other species were undoubtedly present. The groups of warblers and sparrows are noticeably small. At least one observation of each species was made in Woodbury County, unless otherwise stated. Except in a few instances the identifications were made by sight. All points of identification were checked with great care. A great many of my field trips were made with Dr. T. C. Stephens, professor of zoology at Morningside College. Without his help this list would be without many records.

Eared Grebe. Rare; one record of three individuals on Brower's Lake, April 14.

Pied-billed Grebe. Common; two nests with eggs on New Lake, May 31.

White Pelican. During most of September these birds were abundant in the vicinity of Brown's Lake; on September 6 a flock of 1000 was on the lake.

Double-crested Cormorant. One record of three individuals on Brown's Lake, May 1.

Great Blue Heron. Many records from the latter part of July to the middle of October.

Eastern Green Heron. On October 23, Weir Mills of Pierson brought a crippled Green Heron to Morningside College. This bird, a male, was taken in the southwest corner of Cherokee County where it had probably been wounded by hunters. At the suggestion of Dr. Stephens I made a skin of the specimen. I have a record of one other at New Lake on August 2.

Black-crowned Night Heron. One April record of three individuals at the confluence of the Floyd and Missouri Rivers.

Am. Bittern. Numerous records from March to October.

Eastern Least Bittern. One at Crystal Lake, Nebraska, September 6.

Canada Goose. A number of records through the month of March. I was unable to make a positive identification of this bird during the fall months, although geese which probably were of this species were seen at a distance several times.

Lesser Snow Goose. Numerous records through March and the first half of April of many thousands; one fall record of 60 on October 18 near Salix, Iowa.

Blue Goose. From March 7 to April 12 this bird fed in large numbers on the Missouri River bottoms south of Sioux City. It outnumbered the Lesser Snow by at least ten to one. The largest single flock of which I have a record for 1936 contained 3,500. In March, 1935, while driving from Dell Rapids, South Dakota, to Jasper, Minnesota, I saw a flock of Blue and Snow Geese which must have numbered far above 10,000. All during the day I had seen one flock after another feeding or resting in the fields, and flocks were in the air constantly. Many of the flocks were large, running into the thousands, but none that I had seen before, even on the Missouri River bottoms, compared with this in size. The flock was so large that literally clouds of geese would arrive or leave without making any apparent change in the size of the flock. Around this vast congregation for miles, were flock after flock of from 25 to over 1000 birds. The geese were arriving, leaving and milling around constantly. I had little chance to estimate their numbers. There might have been 25,000 birds. The Blue Goose does not come through here regularly in its fall migration.

Common Mallard. Common during migration, but I have no summer record. In this locality the Mallard winters as far north as it can find open water. On December 30, I saw 800 Mallards feeding in a field adjacent to Lake Andes, South Dakota. The water there is kept open over a small area by the artesian well which feeds the lake. I have seen them there in other years when temperature was ten below zero and snow banks were piled six feet high along the road. In this low temperature a pretty sight is a flock of Mallards wheeling and diving out of sight into the dense vapor cloud which rests like a snow bank over the open water.

Gadwall. Numerous records.

Baldpate. Numerous records.

Am. Pintail. Numerous spring and fall records.

Green-winged Teal. Numerous records.

Blue-winged Teal. Common, although I doubt if it nested here in any numbers as I have no record from May 24 to August 2.

Shoveller. Numerous records during migration.

Wood Duck. One record of 14 on Brower's Lake, April 21.

Redhead. Two records for April; 27 birds.

Ring-necked Duck. Numerous records.

Canvas-back. Seven records during April and May; 101 birds.

Lesser Scaup Duck. Common during migration.

Ruddy Duck. Several records of a few individuals.

Am. Merganser. One record each for April, May, November and December; seven birds in all.

Turkey Vulture. Two records; two individuals.

Cooper's Hawk. One specimen taken March 20, south of Sioux City, my only record.

Eastern Red-tailed Hawk. Numerous records.

Am. Rough-legged Hawk. Three records; four individuals.

Ferruginous Rough-leg. Rare; a record of one individual near Sioux City in March.

Marsh Hawk. Numerous records.

Osprey. One bird at Brown's Lake on August 23. Decidedly uncommon here.

Pigeon Hawk. Two records; two individuals.

Eastern Sparrow Hawk. Numerous records from March to October.

Greater Prairie Chicken. One November record.

Eastern Bob-white. A record of two birds in Monona County October 9 and five birds in Woodbury County on Christmas day. On December 30 I saw a flock of 30 near Lake Andes, South Dakota.

Ring-necked Pheasant. Numerous records. Not as plentiful as in 1935.

Am. Coot. Abundant on all marshes and sloughs during April and May. A few probably nested as they were seen in small numbers through the summer.

Killdeer. Abundant from the middle of March to late October. Our most common shore bird.

Wilson's Snipe. Many records during migration.

Spotted Sandpiper. Known locally as the "Teeter Snipe." Numerous records through the summer.

Eastern Solitary Sandpiper. This bird was present in small numbers during June, July and August. DuMont says in his 'Birds of Iowa': "There are no recent reports of probable breeding." These records might indicate the bird breeds here.

Greater Yellow-legs. Numerous records, but not as abundant as the Lesser.

Lesser Yellow-legs. Numerous records from April, May, August, September and October.

Pectoral Sandpiper. Several records during migration.

Least Sandpiper. Common during migration. It leaves about the first of June and is back about the middle of August.

Dowitcher. One bird at New Lake on August 2 and a flock of 12 in Monona County on October 3.

Semipalmated Sandpiper. Numerous records for May and August.

Marbled Godwit. Two individuals at Brower's Lake on May 20.

Hudsonian Godwit. Three records; seven individuals.

Wilson's Phalarope. Several spring records; on May 3 a flock of 60 was feeding on Brower's Lake.

Herring Gull. One record each for March and April.

Franklin's Gull. One record; the bird is usually a common migrant.

Least Tern. Numerous records through the summer, which indicate that it probably breeds here.

Black Tern. Three records for May and one for August.

Mourning Dove. Abundant summer records.

Yellow-billed Cuckoo. Several records.

Black-billed Cuckoo. One bird seen near Brown's Lake, July 19.

Eastern Screech Owl. One specimen, a female, taken at Sioux City on October 17 is my only record.

Great Horned Owl. One specimen, a female, taken in the timber along the Missouri River on November 15; another bird was seen at the same time.

Eastern Whip-poor-will. Two records for July.

Sennett's Nighthawk. Numerous summer records.

Chimney Swift. Records through the summer.

Ruby-throated Hummingbird. Two records in September.

Eastern Belted Kingfisher. Two birds in August and two in September at New Lake; considerably less abundant in recent years.

Northern Flicker. Numerous records. I have a winter record for 1935, but none for this year.

Red-headed Woodpecker. Numerous records. Dr. Stephens and I counted nine in Riverside Park on Christmas day.

Yellow-bellied Sapsucker. Three records; four individuals.

Eastern Hairy Woodpecker. Numerous records through the year.

Northern Downy Woodpecker. Numerous records through the year.

Eastern Kingbird. Numerous summer records.

Arkansas Kingbird. Several summer records.

Northern Crested Flycatcher. A record of one bird on May 17 and three on June 14.

Eastern Phoebe. Numerous records.

Eastern Wood Pewee. Four records; six individuals.

Prairie Horned Lark. Quite common. A nest with four eggs was found April 14. All four eggs hatched and the last young bird left the nest between April 30 (when there were two birds in the nest) and May 3 (when the nest was empty). On December 30, while driving from Mitchell to Yankton, South Dakota, I counted 2000 larks. These were possibly Hoyt's Horned Lark.

Tree Swallow. A record of one bird at Crystal Lake on September 6.

Bank Swallow. Numerous records.

Barn Swallow. Common; large flocks during August and September.

Rough-winged Swallow. Common. Most of the large flocks during fall migration are composed of three or four species, but the Barn Swallow seems to predominate.

Northern Cliff Swallow. One individual at Riverside on May 17.

Purple Martin. Numerous from April 17 to August 23.

(To be concluded in the March issue.)

GENERAL NOTES

The Franklin's Gull at Independence.—On the afternoon of June 8, 1937, I found this bird in a plowed field adjacent to the mill-pond at Independence. As I approached the field, I noticed a small gull or tern which was flying gracefully over the plowing, pausing occasionally to pick up food. Its back was grayish blue, the head was a rich glossy black, and the tail was snowy white. I knew the bird was not a tern when I saw the rounded tail, and I had no difficulty in identifying it as the Franklin's Gull. The primaries were black, tipped with white, and the fact that the bill was red excluded the possibility of its being the Bonaparte's Gull. The bird remained at the field all afternoon until evening, and continually followed a plow and tractor back and forth across the field, often coming close to the driver. When attacked by grackles it uttered a rather harsh note, which was not often heard, however, due to the noise of the tractor. It often came within a very few feet of me, so I was able to observe it closely. The Franklin's Gull was reported once or twice before in the Independence region in 1937. It is much more unusual than the Herring and Ring-billed Gulls, both of which I saw at the Independence mill-pond in the spring of 1937.—JOHN W. LYNCH, Independence, Iowa.

Migration of Warblers at Independence, Spring of 1937.—The following list is a composite record of warblers seen by several bird students of Independence during the past spring.

Black and White Warbler. Very common during the second and third weeks of May; dates were May 8 to 18.

Prothonotary Warbler. One bird was studied carefully on May 8. It was perched in the top of a small willow bordering a stream.

Tennessee Warbler. Common between the dates of May 9 and 21.

Nashville Warbler. A few records between the dates of May 11 and 26.

Yellow Warbler. First record was May 8. It was abundant for a time in the dense thickets at the mill-pond.

Magnolia Warbler. Fairly common from May 11 to 21.

Cape May Warbler. Quite rare; seen once on May 20, twice on May 23, one bird on each occasion.

Myrtle Warbler. Abundant from April 17 to May 9.

Black-throated Green Warbler. I saw one on May 9, and four on May 26.

Cerulean Warbler. I observed one very closely in a thicket of small trees along the north branch of the Wapsipinicon River above the mill-pond.

Blackburnian Warbler. Observed by Grace Leigh during May.

Chestnut-sided Warbler. Fairly common; dates are from May 8 to 23.

Bay-breasted Warbler. I saw two in a grove on the grounds of the State Hospital on May 26.

Black-poll Warbler. Fairly common; dates are from May 17 to 25.

Palm Warbler. Very abundant during the first part of May; first date, May 1.

Oven-bird. Common; arrived May 11.

Grinnell's Water-Thrush. Very common; arrived May 8.

Louisiana Water-Thrush. Mrs. W. M. Woodward and Alva M. Norton observed one bird at the mill-pond.

Connecticut Warbler. Rare; one bird seen on May 17 and 18.

Mourning Warbler. Seen from May 14 to 26.

Northern Yellow-throat. A common summer resident, arriving May 6.

Wilson's Warbler. Quite common between the dates of May 9 and 24.

Canada Warbler. We had a few records from May 11 to 25.

American Redstart. A fairly common summer resident, arriving May 9.—JOHN W. LYNCH, Independence, Iowa.

Herons at East Dubuque.—On September 19, 1937, eight of us members of the Dubuque Bird Club crossed the Mississippi River to East Dubuque, Illinois, and we had a fine experience in exploring some territory near that place. We came upon a secluded pond where 45 (actual count) Great Blue Herons were fishing in every conceivable posture. It was a wonderful sight—so many of these large birds on a fishing expedition. One American Egret honored the party with his presence. There were several Black-crowned Night Herons at this pond. In trees nearer the river we saw perhaps 200 of the latter bird. There were ducks to be seen, also. Some were too far away to identify; others were in immature plumage. Earlier we had seen a Ruddy Duck. On October 3 we found ten Semipalmated Plovers and two Black Ducks at this pond. Only six Great Blue Herons were seen at this time, but the pond was shrinking rapidly due to river conditions. The Egret was also seen on this date.—MRS. R. W. JOHNSON, Dubuque, Iowa.

Observations in the Dubuque Region.—With an abundance of trees, the Mississippi River, and much marsh territory, Dubuque offers exceptional advantages to the bird lover. The easily accessible marshes, at the very edge of the northern part of the city, have been very attractive and we have had opportunity to become acquainted with many birds not otherwise to be seen. In season these marshes are teeming with bird life. Below are given a few of our more interesting records, in most of which the members of the Dubuque Bird Club shared.

American Egret. On September 6, 1937, Miss Margaret Kohlman saw a flock of 10 of these birds along the river. Ethan Hemsley saw the flock the next day and again on September 17. Their large size and yellow bill were carefully noted, so there was no possibility of confusion with the immature Little Blue Heron.

American Coot. A common migrant. It is not at all unusual to see a Coot, but to see a family of Coots—there you have something! In June, 1935, several members of the Club saw Mother and Dad and the little Coots out for a swim one fine Sunday afternoon.

American Woodcock. Some of the members saw several of these birds on April 25, 1936, at Frith's Pond.

Greater Yellow-legs. Although the Lesser Yellow-legs is common,

the Greater Yellow-legs is less often seen. One flock of about 30 was seen at the marsh on April 16, 1933.

Wilson's Phalarope. Our records are: April 28, 1929; May 13, 1934; April 29, 1936.

Pileated Woodpecker. Two records, June 2, 1933, and May, 1936.

Red-breasted Nuthatch. I have only two records—May 10, 1932, and May 3, 1936.

Carolina Wren. Although we have become well acquainted with this bird down on the farm in southern Indiana, we saw it here for the first time on April 20, 1936, on Mrs. Bush's place, and again in the latter part of May at Durango.

Bohemian Waxwing. In February, 1932, a flock of these birds visited Dubuque and were entertained at various apple trees over the city, where neglected apples had clung throughout the winter. These provided my only record, though others have later records.

Starling. My first record here was April 22, 1934. In a very few years it has changed from an uncommon bird into a very common one —unfortunately!

Yellow-throated Vireo. It was hard to get acquainted with this bird, but it is now easy to find if we look for it. After a positive identification in 1930, I have seen it every year.

Orchard Oriole. One record only, May 21, 1933.

Blue Grosbeak. This bird is the phantom of the Bird Club, now visible, then invisible. My first record was May 24, 1929; next, May 17, 1931, and May 14, 1933. My latest record was May 14, 1935, just across the street from Linwood. The bird was carefully observed on each occasion and distinguishing features were noted.—MRS. R. W. JOHNSON, Dubuque, Iowa.

RECENT BIRD BOOKS

AUDUBON'S THE BIRDS OF AMERICA, with introduction and text by William Vogt (Macmillan Company, New York City, 1937; cloth, frontispiece and 500 colored plates; price, $12.50).

The reviewer has seen the "Elephant Folio" edition of Audubon's colored plates on only one occasion. That was a number of years ago at the John Crerar Library in Chicago. He informed the assistant librarian that he wished to see the books, and after being questioned rather sharply as to the extent of his interest in ornithology, he was led to an upper room, where a steel vault was unlocked and the treasured volumes disclosed. The next hour was spent in studying the magnificent plates, which were printed from copper engravings and hand-colored a century before. The set comprises four massive books, each measuring about 2½ by 3½ feet and weighing close to forty pounds. The Elephant Folio set is excessively rare and valuable. The later editions were in smaller octavo and contained both plates and text. They are also rare and accessible in only a few of the larger libraries of the country.

Bird students have for years wished that some one would republish the 'Birds of America'. At last the wish is fulfilled as the Macmillan Company brings out the set of 500 colored plates in one volume. We hope the venture will prove profitable and will be followed by the re-publication of Audubon's 'Ornithological Biography', the text that accompanied his plates. So many of Audubon's observations are doing overtime duty in present-day bird works, it would seem that a reprint of his text would prove quite welcome.

The new book is a very handsome one, both as to binding and contents. The page size is 9 by 12½ inches, with one plate or drawing to a page. Reproduction is by the deep-etch offset lithographic process which gives the authentic colors of the original print. William Vogt

has written a short biography of Audubon, which with a frontispiece portrait forms the introduction. A brief description of the bird pictured, also written by Mr. Vogt, is a feature of each plate. For the amount of space available, these descriptions contain a surprising amount of information. Written in a lively and interesting manner, they are exactly what the plates need to fulfill a maximum usefulness in the modern day. The original nomenclature and names of plants and trees depicted are not retained on the plates but are fully transcribed in a special section in the back of the book. The plants drawn by Audubon were often given as much prominence as the birds themselves. This section giving the original names adds a good deal to the historical value of the book. Production costs make a book of this kind very expensive. No doubt many people will not feel able to buy it; but here is where the public library will perform its function. The book will be in great demand at libraries, while after nearly a century of obscurity Audubon's great drawings will exert a sure educational influence on all library patrons. It is an extraordinary book, a new presentation with historic background—a very worthwhile acquisition for any library, public or private.—F. J. P.

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CONCORD RIVER, by William Brewster (Harvard University Press, Cambridge, Mass., 1937; cloth, pp. i-ix + 1-259, 12 pls. 3 in color by Frank W. Benson; price, $3.50).

We have read many books by the literary naturalists of the northeastern states. Thoreau was a mystic who delighted in inverted meanings, and his writings are hard to follow and to understand. Bradford Torrey wrote quite interestingly of his bird experiences, though his chapters are so wordy one suspicions him of using a good share of his words as filler to lengthen his sketches. John Burroughs we find entertaining enough but given to soaring in the clouds with his pen. The writing of William Brewster has none of these peculiarities. He was a master of description with a perfect literary style, and his appreciation of the beauties of nature was as keen as anyone's, but he kept his feet on the ground. His was the scientific mind. He searched unremittingly for scientific truth, and his discoveries were set down with the strictest accuracy. The literary treatment of his observations as recorded in his daily journals seems to have been an unconscious process. He was writing for William Brewster, not for the public. His journals are exceedingly interesting reading, especially for the nature lover, and his style of writing is at once instructive, entertaining, restful.

This book might be called a sequel to 'October Farm'. It is a continuation of selections from the Brewster journals, the first section of which was published under that title. The locale is the same—Brewster's large wooded tract on the Concord River, near Concord, Massachusetts. The selections included in this volume extend through 1879-1918, and are of course very similar to those in the first book, covering his observations of birds, mammals and natural phenomena during days and weeks spent on his October Farm and the nearby river. We haven't space to comment on the things he recorded, but we particularly liked his description of the death of a young Purple Martin by the talons of a small hawk (pp. 59-60); in this passage is revealed the tender nature of the man. It seems unfortunate that a larger size of page was chosen for this book so it is not uniform with 'October Farm'.—F. J. P.

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Send in your Christmas bird census. We plan to publish all the Iowa censuses, including those from 'Bird-Lore', in tabulated form in our March issue.

THE NATURAL HISTORY OF MAGPIES, by Jean M. Linsdale (Pacific Coast Avifauna No. 25, published by Cooper Ornithological Club, 2068 Escarpa Drive, Los Angeles, Calif., 1937; pp. 1-234, 9 pls. 1 in color, 20 text figs.; price, $3.50 in paper cover, $4.25 in cloth).

In recent years quite a number of bulky volumes have appeared, each devoted to a single species of bird and covering the subject in a very complete way. Among such monographs are Pickwell's Prairie Horned Lark, Gross's Heath Hen, Herrick's American Eagle, Pettingill's American Woodcock and Mrs. Nice's Song Sparrow. To this series we may now add Linsdale's work on the Magpie; in thoroughness and scope it is a worthy companion of the others.

Consideration is given to the various magpies found over the world, but the book is mainly descriptive of the Yellow-billed and the Black-billed Magpies found on the North American continent. The Yellow-billed is restricted to the state of California, while the Black-billed or American Magpie is found over much of the western half of the United States and in western Canada.

The chapter on 'Habitat Relations' explains why the magpie remains in certain localities. The bird's wings are short and rounded so that it is incapable of swift or sustained flight. It depends on escape from enemies by a quick retreat into clumps of brush such as are found in the plains region. A variety of food items being available there, and bushy or thorny trees furnishing convenient nesting sites, the Black-billed Magpie normally finds conditions suitable for an existence in our western states. A water supply in the form of lake, stream or reservoir is a requirement in the bird's nesting area, and it shows a decided preference for human neighbors, especially those who keep domesticated animals on their premises. The chapter on food habits shows the wide range of its diet, which includes grain and fruit in season and insects and animal matter, of which birds' eggs and young form a part, at other times of the year. It turns scavenger when necessity or inclination directs, and carrion of all kinds is readily disposed of. It is quite carnivorous, with vegetable food taken as second choice. The magpie is only slightly migratory, and apparently it migrates chiefly when food becomes scarce or severe winter weather makes living difficult. The bird invades our own state during the winter months. Other chapters cover nesting and courtship, eggs and incubation, behavior and development of the young, plumages and molting, populations and longevity, and relations to animals and to man. In a discussion of habits such matters as perching and roosting, bathing, flocking and voice are considered. Magpies in captivity have been known to reach the age of 20 years. The birds have proved a serious pest to stockmen when, due to lack of food in winter, they have alighted on the backs of horses, cattle and sheep and picked large holes in their bodies, sometimes killing the animals by persisting in this habit. A very complete bibliography of 24 pages and an index conclude the book.—F. J. P.

NOTICE TO MEMBERS

Membership dues for 1938 may be sent in at any time. Send your dollar to Miss LaMar, 1231 Thirty-ninth St., Des Moines, as soon as you can conveniently do so. It will save postage and Miss LaMar's time if you will do this before she sends you the customary notice.

Let's hear from you more often than during the past year. Other members would like to know what you are doing in bird work and what new birds you have added to your list. Let's keep one another informed through the pages of 'Iowa Bird Life'.